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JAKOVAC, RYAN J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/777,336

Applicant(s)

ADDANTE ET AL.

Examiner

RYAN J. JAKOVAC

Art Unit

2445

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/23/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-32, 60-76 and 78-86 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-32, 60-76, 78-86 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1, 60, and 73 are rejected under 35 U.S.C. 101; these claims cite a method but fails to (1) positively recite the statutory class to which they are tied to, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The methods relate to the processing of data nodes, however, these are interpreted as being embodied in software and thus do not belong to any statutory class.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1, 84 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites in part "...creating a queue corresponding to the destination domain and adding the respective data node to the created queue when the queue does not exist." It is unclear how a node could be added to a queue when the queue does not exist.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7, 18-21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0028580 to Kucherauw in view of US 6,249,807 to Shaw et al (hereinafter Shaw).

Regarding claim 1, 5, 18, 19, 25 Kucherauw teaches a method, comprising: obtaining a plurality of e-mails intended for distribution to a plurality of respective destinations (Kucherauw, [0042-0043], [0073], fig. 4, emails are passed to the MMA.); and creating a data node for each e-mail in said plurality of emails (Kucherauw, [0042-0043], [0073], see also [0095-0096], message created as a data node.),

Kucherauw does not expressly disclose wherein each data node includes a pointer to the corresponding e-mail in persistent storage. Kucherauw does however contemplate using pointers to the retry queue (Kucherauw, [0093-[0094].) as well as reference handles for duplicate messages (Kucherauw, [0104].). However, Shaw discloses wherein each data node includes a pointer to the corresponding e-mail in persistent storage (Shaw, col. 9, line 20-30, When the mail receiver moves a message into an email queue or a mailbox, the incoming email receiver places a pointer to the email message into the particular queue or mailbox. The actual email message

remains in the email message database and will be accessed as necessary using the pointer to the email message.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine wherein each data node includes a pointer to the corresponding e-mail in persistent storage as taught by Shaw with the method of Kucherauw in order to utilize the well known benefits of data pointers such as the dynamic allocation of memory resources.

Kucherauw discloses processing the plurality of data nodes solely within non persistent storage, without requiring that information indicative of the e-mails be written to and then read from persistent storage during the processing of the data nodes (Kucherauw, [0062], applications are loaded in random access memory (i.e. non persistent storage). [0068], mail server software includes for example Sendmail, which as disclosed in [0070], is used for the MTA. [0086], the MTA is instantiated (i.e. created and loaded into RAM). See [0100], invocation of MMA.).

wherein said processing comprises, for each respective data node: (i) determining a destination domain of the respective data node; (ii) adding the respective data node to a queue corresponding to the destination domain of the respective data node when the queue exists (Kucherauw, see at least [0082-0083], a destination domain is determined and messages are placed the domain queues corresponding to their destination.); and (iii) creating a queue corresponding to the destination domain and adding the respective data node to the created queue when the queue does not exist (Kucherauw, [0100], invocation (i.e. creation) of MMA. The MMA comprises the MTAs and the associated domain queues. See at least [0068-0070], [0086], fig. 5. See also, [0091-0096], regarding the data structures associated with creating the threads and queues.); and wherein said processing further comprises: retrieving e-mails corresponding to

each of the data nodes in the first queue; sending each of the retrieved e-mails corresponding to each of the data nodes in the first queue to a destination domain of the first queue (Kuchera, fig. 6a-6b, messages are assigned to queues and delivered to destinations.); and extinguishing the first queue (Kuchera, [0105], queues threads which are not processing messages are marked as "unawakened".).

Regarding claim 2, 3, 20, the combination of Kuchera and Shaw teaches a method as in claim 1, further comprising storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault, wherein said recovery information includes information indicative of the plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail (Kuchera, [0090], and MTA in deferred or fallback mode queues messages to disk when unable to connect to transmit a message. See also, [0088-0089], total network failure between the MMA and a destination results in messages being transferred to a retry queue. If the message fails completely, an error is logged.).

Regarding claim 4, 21, 7, 24, the combination of Kuchera and Shaw teaches a method as in claim 3, the combination of Kuchera and Shaw does not expressly disclose wherein said information indicative of an e-mail in the plurality of e-mails includes a bit vector or wherein said recovery information includes numerical designations which represent each e-mail, and a state of processing of said e-mails. However, these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. Thus,

this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability. See *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the nonfunctional descriptive material with the claimed invention because such data does not functionally relate to the steps in the method claimed and because the subjective interpretation of the descriptive material does not patentably distinguish the claimed invention.

Regarding claim 6, 23, the combination of Kucherauw and Shaw teaches a method as in claim 5, wherein said sending comprises opening a communication channel to a single specified domain and sending each of the e-mails within the single communication channel (Kucherauw, [0078-0083], communication channel is opened to destination and messages are transmitted to destination. See also fig. 6a-6b.).

7. Claims 9-15, 17, 22, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kucherauw in view of Shaw in further view of European Patent Application EP 0 491 367 A2 to Richard E. Batchelor (hereinafter Batchelor).

Regarding claim 9, 26, the combination of Kucherauw and Shaw teaches a method as in claim 1, the combination of Kucherauw and Shaw does not expressly disclose wherein said selecting comprises selecting a queue which has the greatest number of the e-mails within the

queue. However, Batchelor teaches wherein said selecting comprises selecting a queue which has the greatest number of the e-mails within the queue (Batchelor, col. 2, line 50-57, queue is selected which has the number of requests exceeding economic quantity of the available window (i.e. greatest number available.)).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine wherein said selecting comprises selecting a queue which has the greatest number of the e-mails within the queue as taught by Batchelor with the combination of Kucherauw and Shaw in order to adapt the performance in processing email messages and prioritized requests to the characteristics of the system resources to provide optimum performance (Batchelor, pg. 2.).

Regarding claim 10, 27, the combination of Kucherauw and Shaw teaches a method as in claim 1, wherein said selecting comprises selecting a queue which has existed for greatest period of time (Batchelor, col. 4, line 9-15, queue processed in order they were received.).

Regarding claim 11, 28, the combination of Kucherauw and Shaw teaches a method as in claim 1, further comprising, during selection of said first queue, asynchronously looking up domain name server information for a second queue, different than the first, and selecting the second queue (Kucherauw, [0078-0079], [0083-0089], fig. 9, lookup of DNS information for corresponding thread.).

Regarding claim 12, 29, the combination of Kucherauw and Shaw teaches a method as in claim 1, wherein the creating step separates personalized information about each e-mail from non-personalized information (Kucherauw, [0095-0096]).

Regarding claim 13, 30, the combination of Kucherauw and Shaw teaches a method as in claim 12, wherein said non-personalized information includes destination information for the e-mail (Kucherauw, [0095-0096]).

Regarding claim 14, the combination of Kucherauw and Shaw teaches a method as in claim 5, wherein said processing comprises: determining information about processing by said destination domain; and adjusting a speed of processing of the e-mails based on said information of processing of said destination domain (Batchelor, col. 2, line 45-50, destination time windows, requests executed to corresponding open windows.).

Regarding claim 15, the combination of Kucherauw, Shaw, and Batchelor teaches a method as in claim 14, wherein said information about processing comprises speed of e-mail processing (Batchelor, col. 2, line 45-5, priority levels, destination time windows, requests executed to corresponding open windows.).

Regarding claim 17, the combination of Kucherauw and Shaw teaches a method as in claim 1, comprising: obtaining a plurality of e-mails for processing; storing recovery information about a state of processing of the e-mails to persistent storage, wherein said recovery information

comprises less than the entirety of the e-mail (Kuchera, [0090], and MTA in deferred or fallback mode queues messages to disk when unable to connect to transmit a message. See also, [0088-0089], total network failure between the MMA and a destination results in messages being transferred to a retry queue. If the message fails completely, an error is logged.); and processing the e-mails to direct the e-mails to a desired location without writing the e-mail to persistent storage during said processing (Kuchera, fig. 6a-6b.).

Regarding claim 22, the combination of Kuchera, Shaw, and Batchelor teaches a method as in claim 17, wherein said processing arranging information about the e-mails into queues, each queue representing a single domain (Kuchera, fig. 5, single domain queues (i.e. AOL queue.)), and further comprising sending e-mails to a recipient, by sending a plurality of e-mails to a single domain at a specific sending instance (Kuchera, fig. 6a-6b.).

Regarding claim 31, the combination of Kuchera, Shaw, and Batchelor teaches a method as in claim 22, wherein said processing comprises determining a speed of processing of said domain (Batchelor, col. 2, line 45-5, destination time windows, requests executed to corresponding open windows.), and adjusting a speed of processing of the e-mails based on said speed of processing of said domain (Batchelor, col. 2, line 45-5, priority levels, destination time windows, requests executed to corresponding open windows.).

8. Claims 60-67, 73-74, 78-81, and 85-86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchera.

Regarding claim 60, 61, 64, 67, 85, 86, Kucherauw teaches a method, comprising: obtaining a plurality of e-mails for processing (Kucherauw, [0042-0043], [0073], fig. 4, emails are passed to the MMA.); forming a queue map comprising a plurality of queues, (Kucherauw, fig. 5.); sending a plurality of e-mails to a specific destination at a specific time (Kucherauw, fig. 6a-6b, messages transmitted to domains.).

asynchronously looking up, during the time of said sending, DNS information for a domain name using an asynchronous DNS resolver that operates from an offline DNS cache that is periodically updated, for a different destination in said plurality of destinations to be sent at a future time (Kucherauw, [0078-0079], [0083-0089], fig. 9, lookup of DNS information for corresponding thread.).

Kucherauw does not expressly disclose each queue associated with a specific domain representing a plurality of destinations for the plurality of e-mails. Kucherauw discloses individual queues for destination domains as well as a general queue for multiple domains. Having each queue associated with a specific domain representing a plurality of destinations is an obvious variation to one of ordinary skill in the art at the time of the invention.

Regarding claim 62, Kucherauw teaches a method as in claim 61, further comprising storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault (Kucherauw, [0090], and MTA in deferred or fallback mode queues messages to disk when unable to connect to transmit a message. See also, [0088-0089], total network failure between the MMA and a destination

results in messages being transferred to a retry queue. If the message fails completely, an error is logged.).

Regarding claim 63, Kucherauw teaches a method as in claim 61, wherein said recovery information includes information indicative of a plurality of the e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail (Kucherauw, [0088-0089], total network failure between the MMA and a destination results in messages being transferred to a retry queue. If the message fails completely, an error is logged.).

Regarding claim 65, Kucherauw teaches a method as in claim 64, wherein said sending comprises opening a communication channel to a single specified domain, sending a plurality of e-mails within the single communication channel (Kucherauw, [0078-0083], communication channel is opened to destination and messages are transmitted to destination. See also fig. 6a-6b.).

Regarding claim 66, 79, Kucherauw teaches a method as in claim 63. Kucherauw does not expressly disclose wherein said recovery information includes numbers of e-mails, and states of processing of said e-mails, wherein said recovery information includes information indicative of said plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail. However, these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability.

See *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the nonfunctional descriptive material with the claimed invention because such data does not functionally relate to the steps in the method claimed and because the subjective interpretation of the descriptive material does not patentably distinguish the claimed invention.

Regarding claim 73, 74, 80, Kucherauw teaches a method, comprising: obtaining a plurality of e-mails for processing (Kucherauw, [0042-0043], [0073], fig. 4, emails are passed to the MMA.); forming organization information about said e-mails (Kucherauw, see at least [0082-0083], a destination domain is determined and messages are placed the domain queues corresponding to their destination.), wherein said organization information represents a plurality of queues, each queue in said plurality of queues comprising e-mails in said plurality of e-mails that are intended for distribution to a common destination; and selecting a first queue in said plurality of queues to send e-mails, based on characteristics of the e-mails in the first queue (Kucherauw, fig. 6a-6b, emails are distributed according to destination domains.) and, during the selecting step, asynchronously looking up DNS information for a domain name using an asynchronous DNS resolver that operates from an offline DNS cache that is periodically updated, for a second queue in said plurality of queues, different than the first queue (Kucherauw, [0078-0079], [0081-0089], fig. 9, lookup of DNS information for corresponding thread. DNS cache updated [0044].).

Regarding claim 78, Kucherauw teaches a method as in claim 73, further comprising storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault (Kucherauw, [0090], and MTA in deferred or fallback mode queues messages to disk when unable to connect to transmit a message. See also, [0088-0089], total network failure between the MMA and a destination results in messages being transferred to a retry queue. If the message fails completely, an error is logged.).

Regarding claim 81, Kucherauw teaches a method as in claim 80, wherein said sending comprises opening a communication channel to a single specified domain, sending a plurality of e-mails within the single communication channel (Kucherauw, [0078-0083], communication channel is opened to destination and messages are transmitted to destination. See also fig. 6a-6b.).

9. Claims 68-71, 75-76, and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Kucherauw in view of Batchelor.

Regarding claim, 68, 75, Kucherauw teaches a method as in claim 67. Kucherauw does not expressly disclose wherein said selecting comprises selecting a queue which has the most number of the e-mails within the queue. However, Batchelor discloses wherein said selecting comprises selecting a queue which has the most number of the e-mails within the queue

(Batchelor, col. 2, line 50-57, queue is selected which has the number of requests exceeding economic quantity of the available window (i.e. greatest number available.)).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine wherein said selecting comprises selecting a queue which has the most number of the e-mails within the queue as taught by Batchelor with the combination of Kucherauw and Shaw in order to adapt the performance in processing email messages and prioritized requests to the characteristics of the system resources to provide optimum performance (Batchelor, pg. 2.).

Regarding claim 69, 76, Kucherauw teaches a method as in claim 67, Kucherauw does not expressly disclose wherein said selecting comprises selecting a queue which has existed for greatest period of time. However, Batchelor discloses wherein said selecting comprises selecting a queue which has existed for greatest period of time (Batchelor, col. 4, line 9-15, queue processed in order they were received.).

Regarding claim 70, Kucherauw teaches a method as in claim 67, further comprising, during selection of a first queue, asynchronously looking up domain name server information for a second queue, different than the selecting queue (Kucherauw, [0078-0079], [0083-0089], fig. 9, lookup of DNS information for corresponding thread.).

Regarding claim 71, 82, Kucherauw teaches a method as in claim 63. Kucherauw does not expressly disclose wherein said processing comprises determining a speed of processing of

said domain. However, Batchelor discloses wherein said processing comprises determining a speed of processing of said domain (Batchelor, col. 2, line 45-5, destination time windows, requests executed to corresponding open windows.), and adjusting a speed of processing of the e-mails based on said speed of processing of said domain (Batchelor, col. 2, line 45-5, priority levels, destination time windows, requests executed to corresponding open windows.).

10. Claims 16, 32, 72, 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kucherauw, Shaw, and Batchelor and further in view of US 2002/0143885 to Ross, JR (hereinafter Ross).

Regarding claim 16, 32, 72, 83, the combination of Kucherauw and teaches a method as in claim 1, the combination of Kucherauw, Shaw and Batchelor teaches the method of claim 17, Kucherauw teaches the method of claim 60 and 73, further comprising: maintaining a log representing information relating to e-mails which have been processed in said software package (Kucherauw, [0088-0090]).

The respective combinations of Kucherauw, Shaw and Batchelor do not expressly disclose comparing contents of said log with licensing information, to determine if said information e-mails exceeds a licensed number. However, Ross discloses comparing contents of said log with licensing information, to determine if said information e-mails exceeds a licensed number (Ross, abstract, paragraph [0034-0036], [0167-0175], email licensing.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine comparing contents of said log with licensing information, to determine if

said information e-mails exceeds a licensed number as taught by Ross with the method of Batchelor in order to exchange email with a measure of security such as licensing criteria and in order to facilitate sending secured email (Ross, [0034]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN J. JAKOVAC whose telephone number is (571)270-5003. The examiner can normally be reached on Monday through Friday, 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RJ/

/Larry D Donaghue/

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Primary Examiner, Art Unit 2454